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DTAGS (DEEP TOWED ARRAY GEOPHYSICAL SYSTEM) TELEMETRY  
SYSTEM(U) ELECTROSPACE SYSTEMS INC RICHARDSON TEX  
24 JUN 83 N00014-82-C-0764

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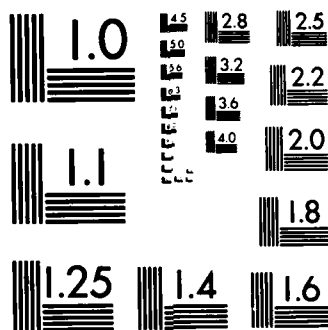


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Scientific Officer  
Ocean Technology Division  
Instrumentation Division  
Naval Ocean Research and Development Activity  
NSTL Station, Mississippi 39529

Attention: Mr. Stephen E. Spsychalski (Code 350B)  
Subject: Contract No. N00014-82-C-0764/A007  
Enclosure: DTAGS Telemetry System Final Report,  
24 June 1983 (1 copy)

Dear Sir:

ElectroSpace Systems, Inc. is pleased to submit the Final Summary Report for the DTAGS Telemetry System as required in the subject contract.

If you have any questions please contact the undersigned or Dr. Steve K. Jones at 214/231-9303.

Very truly yours,

ELECTROSPACE SYSTEMS, INC.

E. Delbert Horton  
DTAGS Program Manager

EDH/cln

cc: Cliff Davis (letter only)  
Scientific Officer/N68462  
ACO/S4403A  
Director, Naval Research/N00173  
Defense Technical Information Center

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DTAGS  
TELEMETRY SYSTEM  
FINAL REPORT

Prepared by  
ELECTROSPACE SYSTEMS, INC.

June 24, 1983

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## DTAGS TELEMETRY SYSTEM - FINAL REPORT

This report summarizes and reviews the development of the telemetry system for the Deep Towed Array Geophysical System (DTAGS).

The DTAGS telemetry system consists of the following assemblies:

PCM Uplink Encoder,

FSK Downlink Control

Cable Interface

The PCM Uplink Encoder included the following towfish printed circuit boards:

Analog Interface (9)

Analog Mux (2)

Floating Point Amplifier (1)

PCM Mux & Control (1)

PCM Submux (1)

Shield Board (1)

Motherboard (1)

The motherboard included space for 8 GFE printed circuit boards. Also a part of the PCM Uplink assembly was the towfish encoder chassis and a single channel digital to analog converter to be located topside.

The FSK Downlink Control assembly included the FSK Encoder, located topside, and the following printed circuit boards located in the towfish:

FSK Decoder - 1 (1)

FSK Decoder - 2 (1)

The Cable Interface included the following towfish printed circuit boards:

PCM Driver (1)

Power Isolator (1)

Also included is a topside cable interface and equalizer which provides power isolation, separates uplink and downlink signals on the cable, and equalizes the attenuation characteristics of the cable. Pictures of the DTAGS Telemetry System equipment are included in Appendix A.

APPENDIX A

Photographs of the DTAGS  
Telemetry System

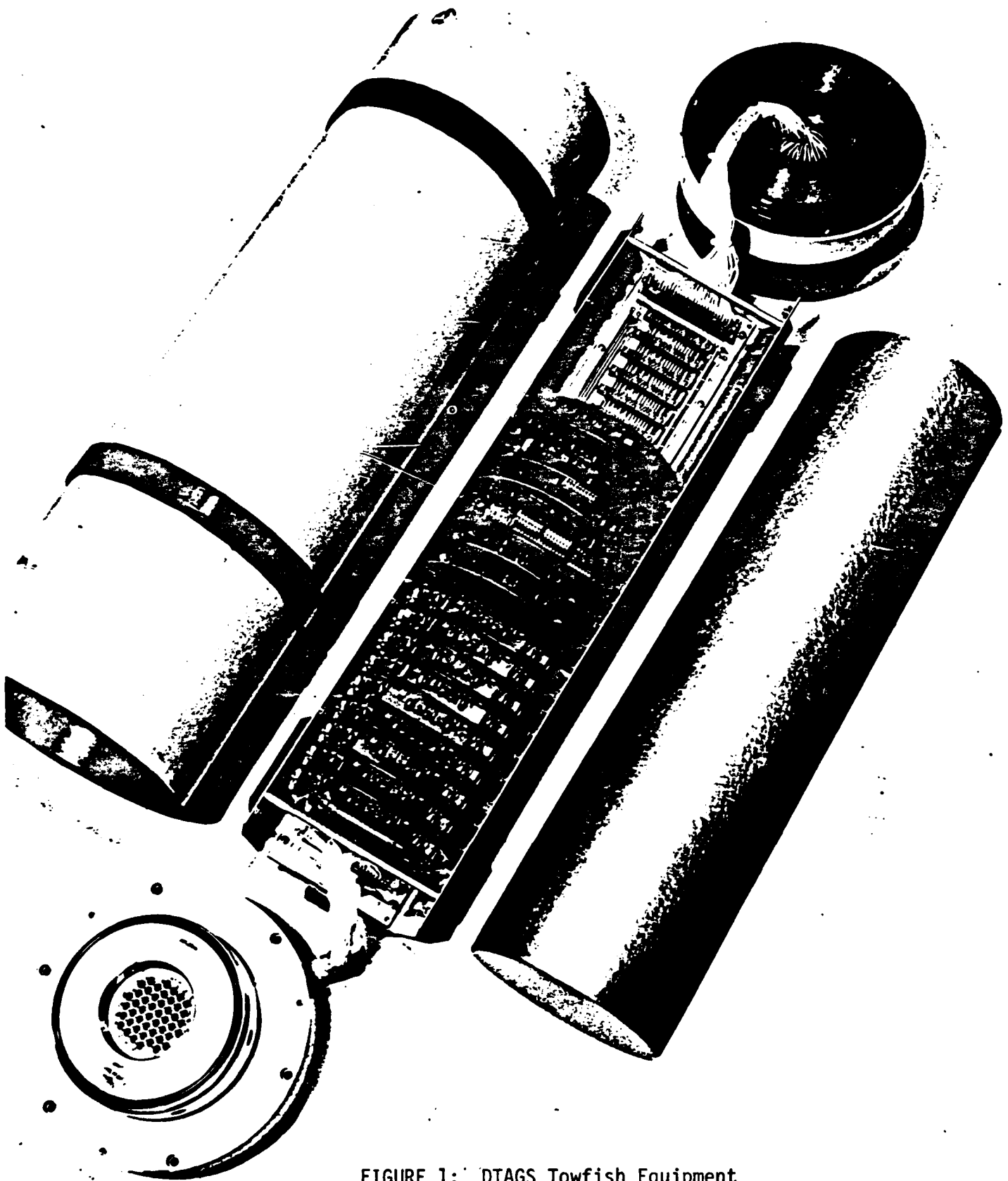


FIGURE 1: DTAGS Towfish Equipment



FIGURE 2: DTAGS Towfish Boards - from left to right:  
Top Row - PCM Mux & Control, FSK Decoder #2, FSK Decoder #1;  
Second Row - PCM Driver/Cable Interface, Floating Point  
Amplifier, Analog Interface; Third Row - Analog Mux #2,  
PCM Submux, Analog Mux #1.

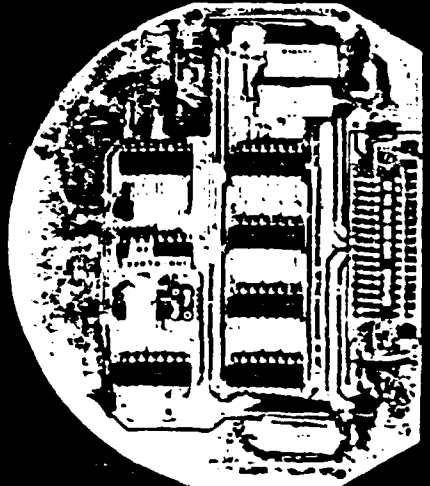
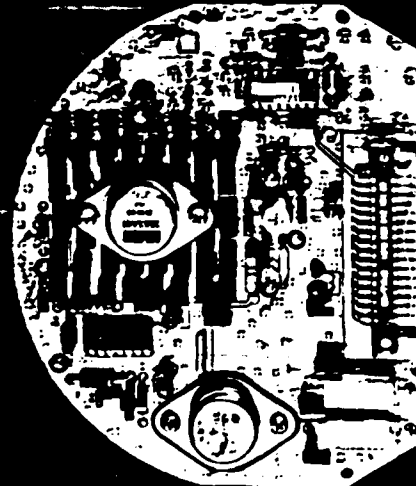
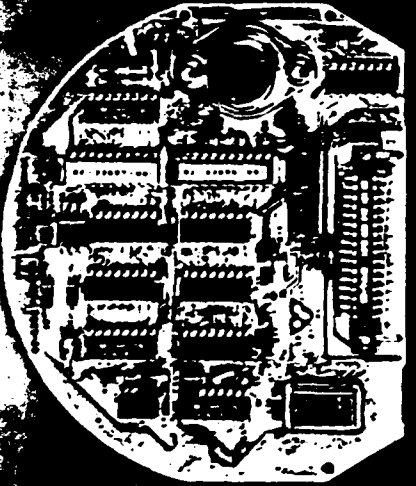
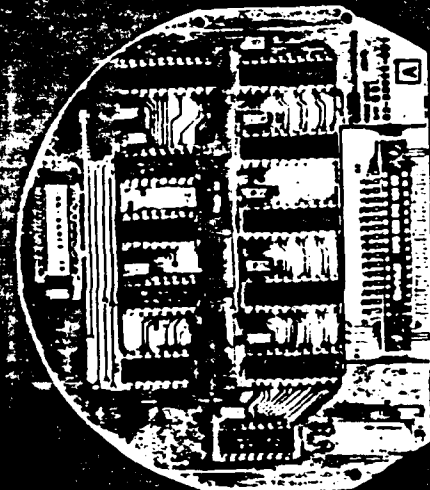
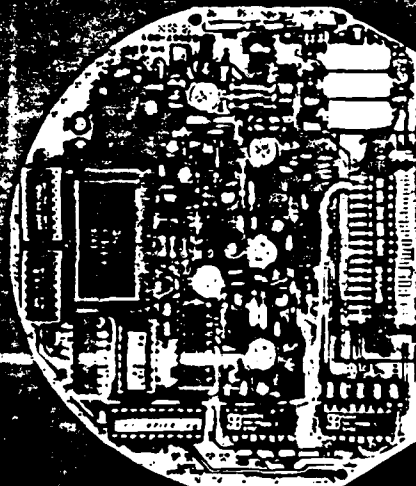
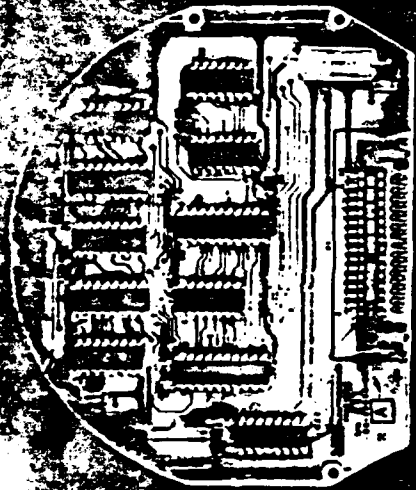
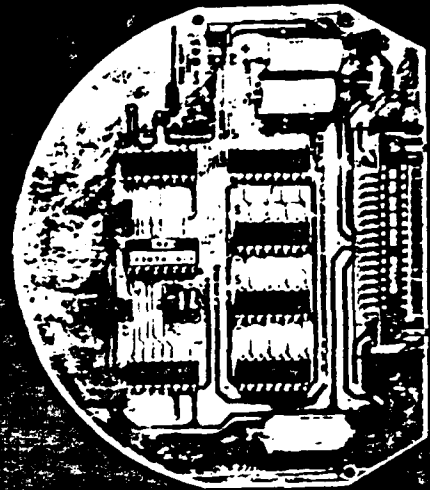
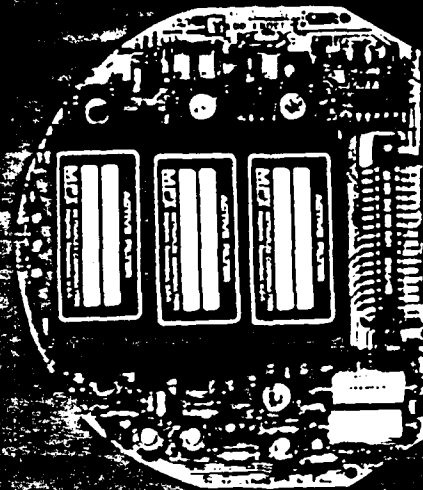
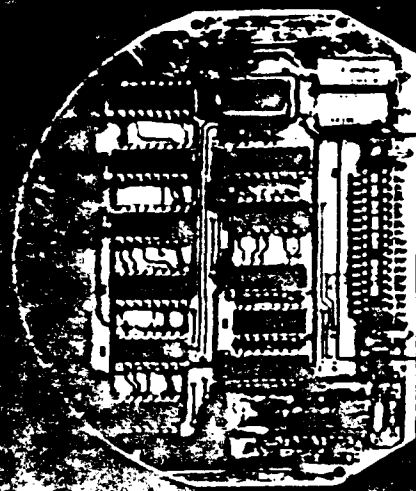


FIGURE 2: DTAGS Towfish Boards

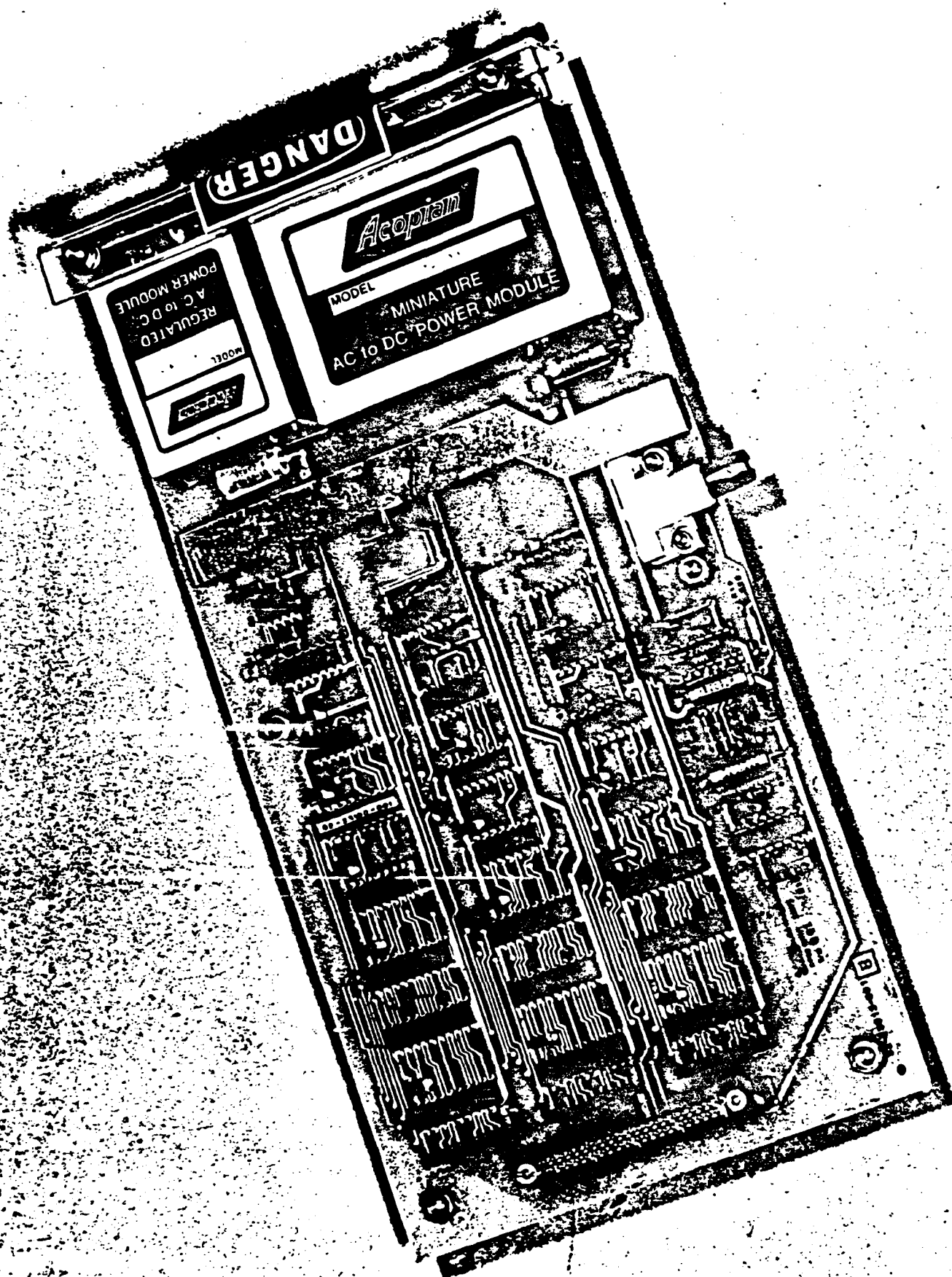


FIGURE 3: Topsisides FSK Encoder & Modulator

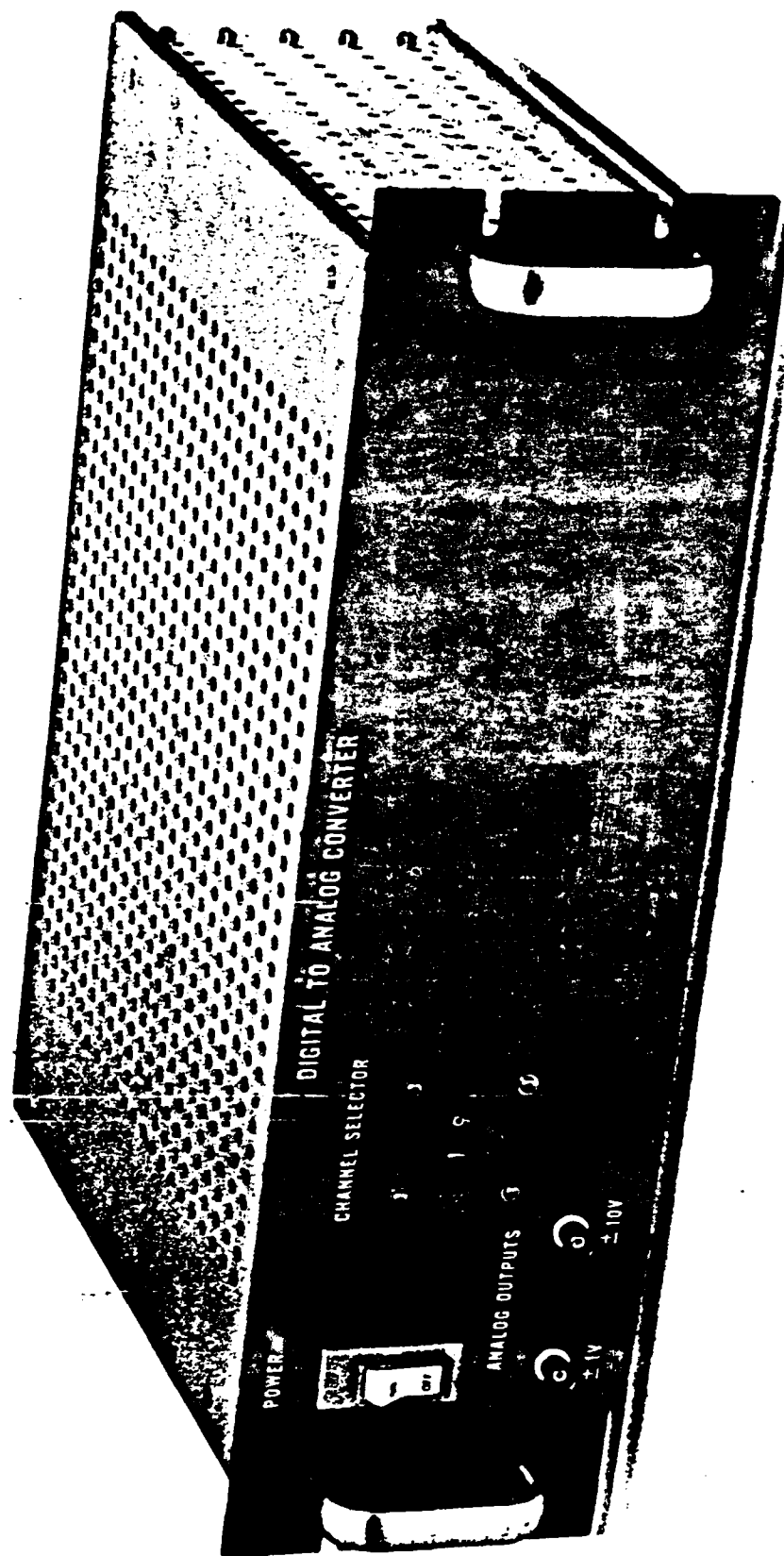


FIGURE 4: Topside Digital to Analog Converter Assembly

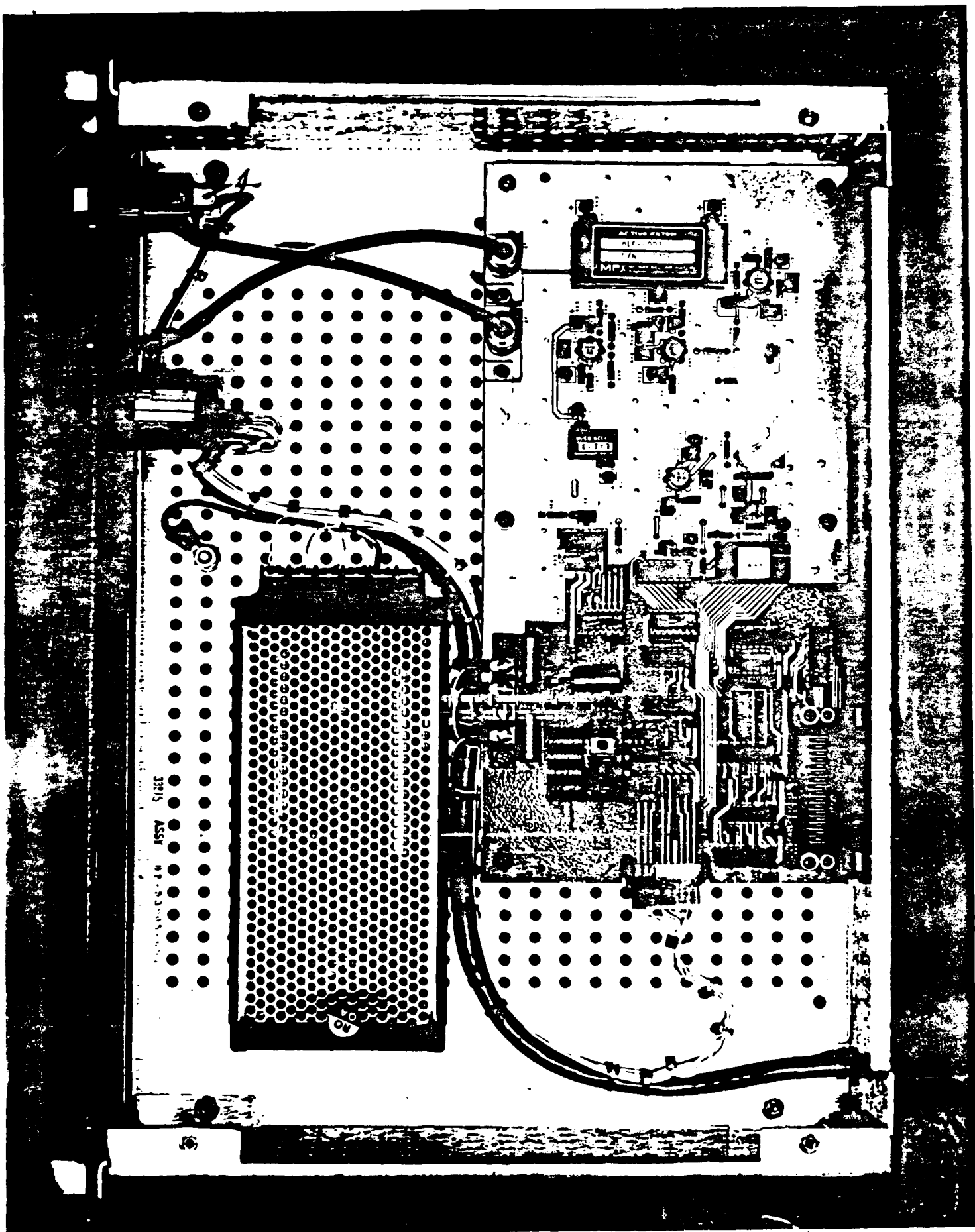


FIGURE 5: Interior of Digital to Analog Converter

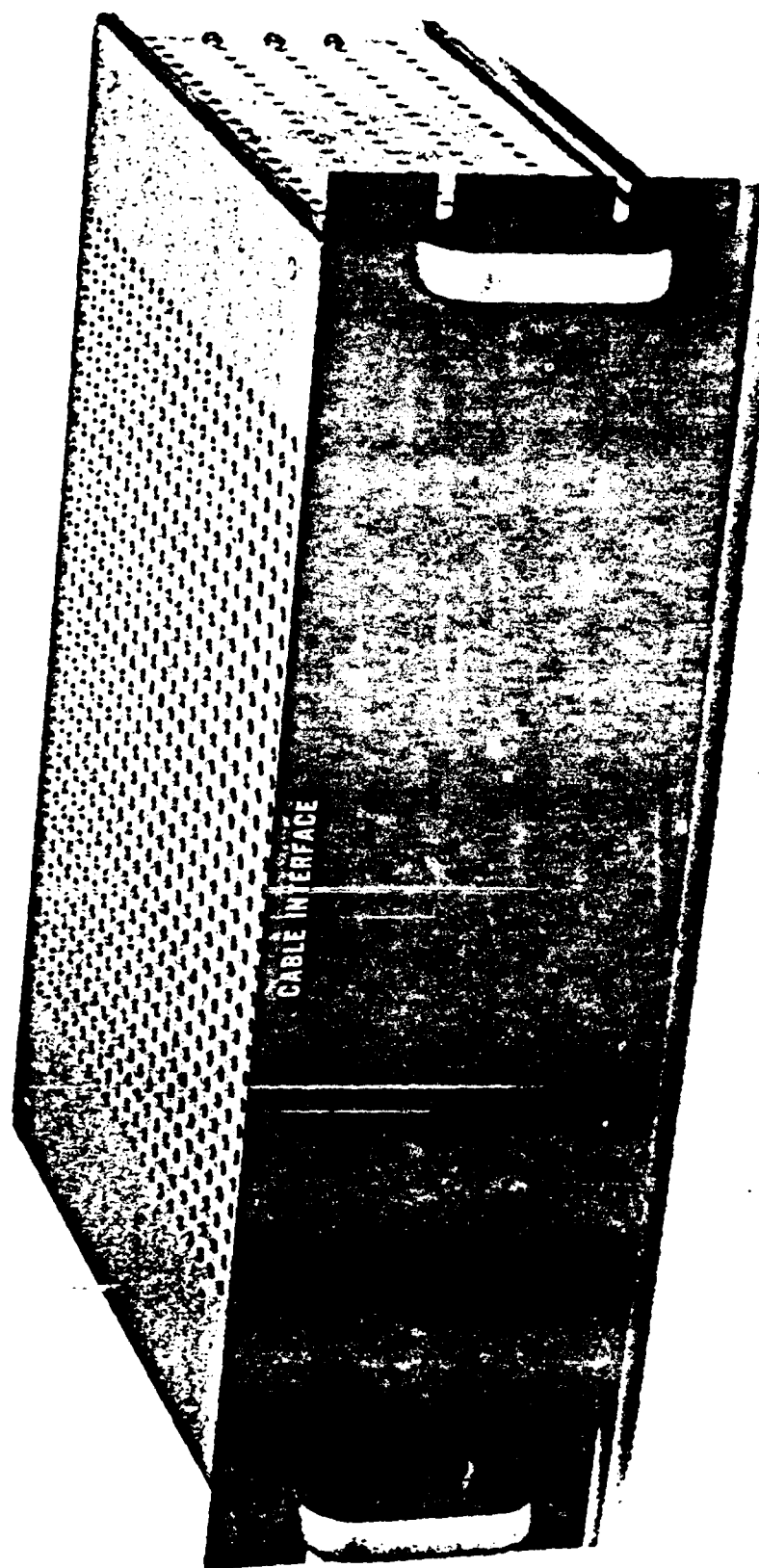


FIGURE 6: Topside Cable Interface Assembly

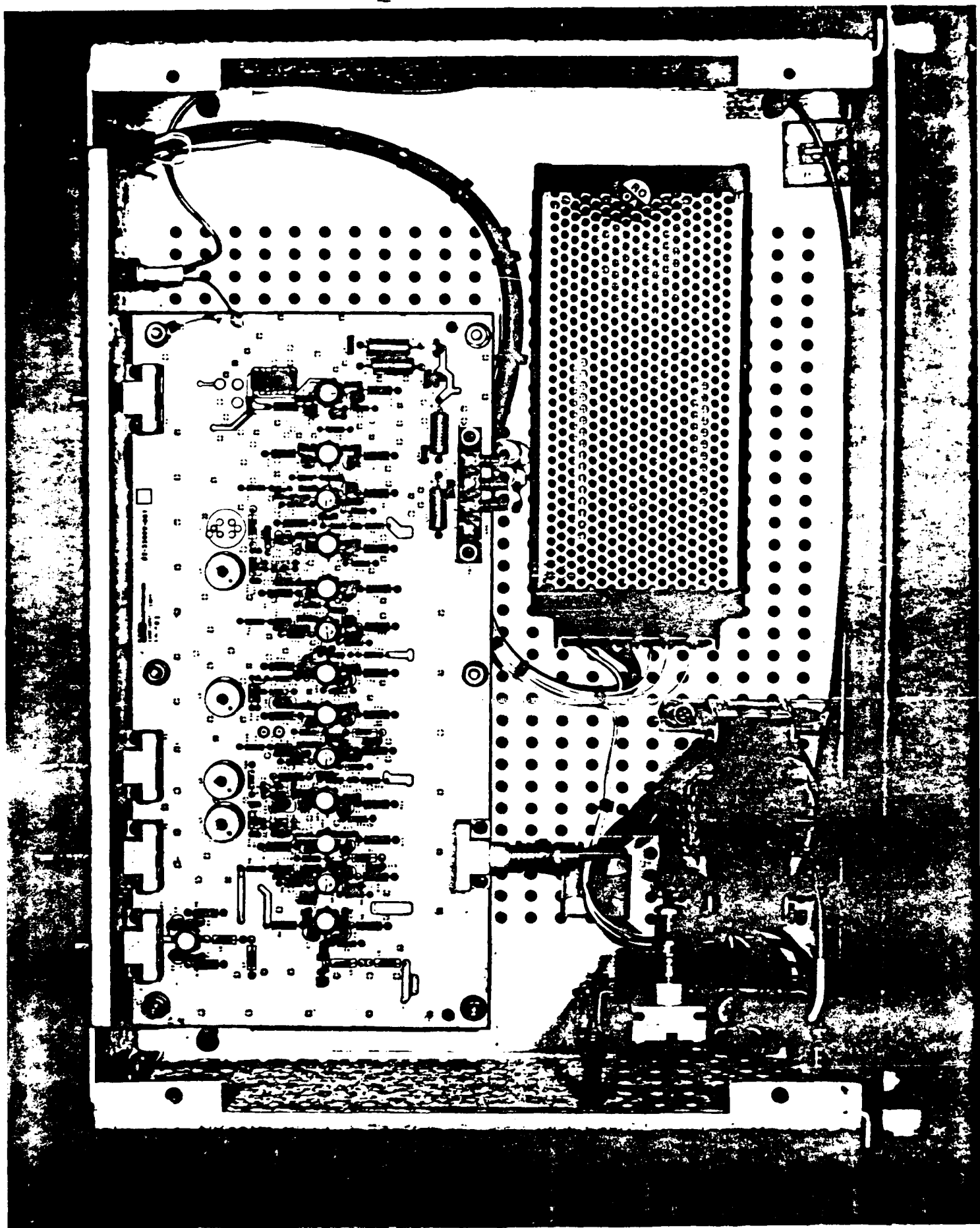


FIGURE 7: INTERIOR OF CABLE INTERFACE

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